ADDENDUM

SECTION 00 91 11.01 - ADDENDUM 001

OWNER	**INDIANA UNIVERSITY**
PROJECT	**20222168 - BL143C - SOCIAL RESEARCH DOAS UNIT REMODEL** **A/E PROJECT 5-6633**
PURPOSE	**THIS ADDENDUM SHALL FORM PART OF THE BIDDING DOCUMENTS. CHANGES, ADDITIONS, CLARIFICATION OR DELETIONS HEREIN SUPERSEDE THE DRAWINGS AND SPECIFICATIONS. BIDDERS SHALL INCLUDE ON THE PROPOSAL FORM ACKNOWLEDGEMENT OF THE RECEIPT OF THIS ADDENDUM.**
ATTACHMENTS	**GENERAL: PRE-BID MEETING AGENDA** **REISSUED SPECIFICATIONS: 23 09 23** **REISSUED SHEETS: M1.2.04, M5.1.01**
ARCHITECT-ENGINEER	**GMB** **317.641.0674** **WWW.GMB.COM**

ADDENDUM

GENERAL

1.1 PRE-BID MEETING AGENDA (NEW)

SPECIFICATION CLARIFICATIONS / REVISIONS

2.1 SECTION 23 09 23 DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC (REISSUED)

A. Clarified controls scope

SHEET CLARIFICATIONS / REVISIONS

3.1 SHEET M1.2.04 - FOURTH FLOOR PLANS (REISSUED)

A. Clarified Controls Scope

3.2 SHEET M5.1.01 - MECHANICAL SCHEDULES (REISSUED)

A. Clarified Controls Scope

END OF SECTION

PRE-BID MEETING AGENDA

Indiana University
Date/Time: April 14, 2026 at 10:00am
Project Name: 20222168 - BL143C - Social Research DOAS Unit Remodel
GMB Project Number: 5-6633

A. Introductions

1. Sign-in
2. Owner
    a. IU Team Lead – Josh Leiting
    b. IU CM – David Riffel
3. A/E

B. Bidding Documents

Bidding Documents are available. Please contact Eastern Engineering Distribution Department, 9901 Allisonville Road, Fishers, Indiana 46038, Ph. 317-598-0661, www.iuplanroom.com for deposit and purchase information.

C. Bid Date

Bids will be received until 2:00 P.M. (local time) on May 6, 2026.

Via electronic bid submission on www.iuplanroom.com. Bidders must be registered on the plan room, and signed in to the plan room, in order to submit a bid.

D. Schedule

There are no specific requirements for completion. The University is flexible with timeline, including mobilization and completion date. Substantial completion is to be noted by the Contractor on the Bid Form.

E. Project Access

Review contractor access plans for location of dumpster.

F. Project Scope

Base Bid:
Removal and replacement of an existing, small DOAS unit in the 4th floor mechanical room. The existing system provides conditioned outside air to the corridor on each floor. The new scope includes new duct added to provide conditioned outside air to each space indicated on plans.

Removal and replacement of damaged plaster as indicated on plans.

Controls will be done by IU EMS.

Alternate 1: Complete all work no later than December 1, 2026.

Unit Price 1: Repair one (1) square foot of existing plaster with plaster.
Unit Price 2: Replace one (1) square foot of existing plaster with gypsum board.

G. Questions and Substitutions

All questions and requests must be received in writing. Email GMB Ecosystem of Teams (sarahb@gmb.com) by Thursday, April 30, 2026, to be included in Addendum.

H. Additional Site Visits

Contact David Riffel (dariffel@iu.edu) to schedule additional visits.

SECTION 23 09 23 - DIRECT-DIGITAL CONTROL SYSTEM FOR HVAC

PART 1 GENERAL

1.1 SECTION INCLUDES

A. ~~System description.~~OWNER-FURNISHED PRODUCTS

B. ~~Networks~~PRODUCTS TO BE INSTALLED, FURNISHED BY IU CONTROLS GROUP

C. SYSTEM DESCRIPTION

1.2 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

B. NEMA EN 10250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

C. NFPA 70 - National Electrical Code.

D. UL (DIR) - Online Certifications Directory.

1.3 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements for submittal procedures.

B. Product Data: Provide data for each system component and software module.

C. Shop Drawings:

1. Indicate trunk cable schematic showing programmable control unit locations, and trunk data conductors.
2. List connected data points, including connected control unit and input device.
3. Indicate system graphics indicating monitored systems, data (connected and calculated) point addresses, and operator notations.
4. Show system configuration with peripheral devices, batteries, power supplies, diagrams, modems, and interconnections.
5. Indicate description and sequence of operation of operating, user, and application software.

D. Manufacturer's Instructions: Indicate manufacturer's installation instructions for all manufactured components.

E. Project Record Documents: Record actual locations of control components, including control units, thermostats, and sensors.

1. Revise shop drawings to reflect actual installation and operating sequences.
2. Include submittals data in final "Record Documents" form.

F. Operation and Maintenance Data:

1. Include interconnection wiring diagrams complete field installed systems with identified and numbered, system components and devices.
2. Include keyboard illustrations and step-by-step procedures indexed for each operator function.
3. Include inspection period, cleaning methods, cleaning materials recommended, and calibration tolerances.

G. Warranty: Submit manufacturer's warranty and ensure forms have been filled out in Owner's name and registered with manufacturer.

1.4 QUALITY ASSURANCE

A. Perform work in accordance with NFPA 70.

B. Designer Qualifications: Perform design of system using manufacturer's software under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

C. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum five years of documented experience.

D. Installer Qualifications: Company specializing in performing work of the type specified and with minimum three years of documented experience.

E. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for purpose specified and indicated.

1.5 WARRANTY

A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.

B. Provide five year manufacturer's warranty for field programmable micro-processor based units.

1.6 PROTECTION OF SOFTWARE RIGHTS

A. Prior to delivery of software, the Owner and the party providing the software will enter into a software license agreement with provisions for the following:
1. Limiting use of software to equipment provided under these specifications.
2. Limiting copying.
3. Preserving confidentiality.
4. Prohibiting transfer to a third party.

PART 2 PRODUCTS

2.1 OWNER-FURNISHED PRODUCTS

A. Indiana University, the Owner, will pre-purchase directly from Siemens building Technologies the following equipment for the building automation system:
1. Direct Digital Control panels.
2. Auxiliary panels with internal components pre-wired.
3. All required sensing devices (ie: temperature sensors).
4. Valves, valve actuators.
5. Dampers, damper actuators.
6. Relays, Transformers.
7. Thermostats/Sensors.
8. All necessary technician labor to verify point wiring, program and start up all DDC panels, perform acceptance testing.
9. All necessary technician labor to verify point wiring, program and start up all DDC panels, perform acceptance testing.

B. The University Control Group will install all control equipment, furnish, install, and terminate all necessary wiring, conduit, hangers, etc. to provide a complete control system installation.

C. Siemens shall supply the following directly to Indiana University:
1. Design Engineering labor required to interface with IU and the consulting engineer to design the temperature control system.
2. Supervision of the installation and final checkout and approval.
3. Project management labor to attend job meetings and ensure construction time compliance and settlement of any conflicts.
4. Technician labor required for point to point check out, software programming, graphics creation and Owner training.
5. All material listed above.
6. During the warranty period, Siemens will respond to all requests rendered by the Owner for satisfactory operation of the system.

2.2 PRODUCTS TO BE INSTALLED, FURNISHED THROUGH IU CONTROL GROUP

A. Contractor to install all dampers, control valves, flow switches, flow meters and temperature sensor wells, VFDs.

2.3 SYSTEM DESCRIPTION

A. Existing DDC system will be utilized.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify existing conditions before starting work.

B. Examine roughing-in for products to verify actual locations of connections before installation.
   1. Examine roughing-in for instruments installed in duct systems to verify actual locations of connections before installation.

   Examine walls, floors, roofs, and ceilings for suitable conditions where product will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 GENERAL INSTALLATION

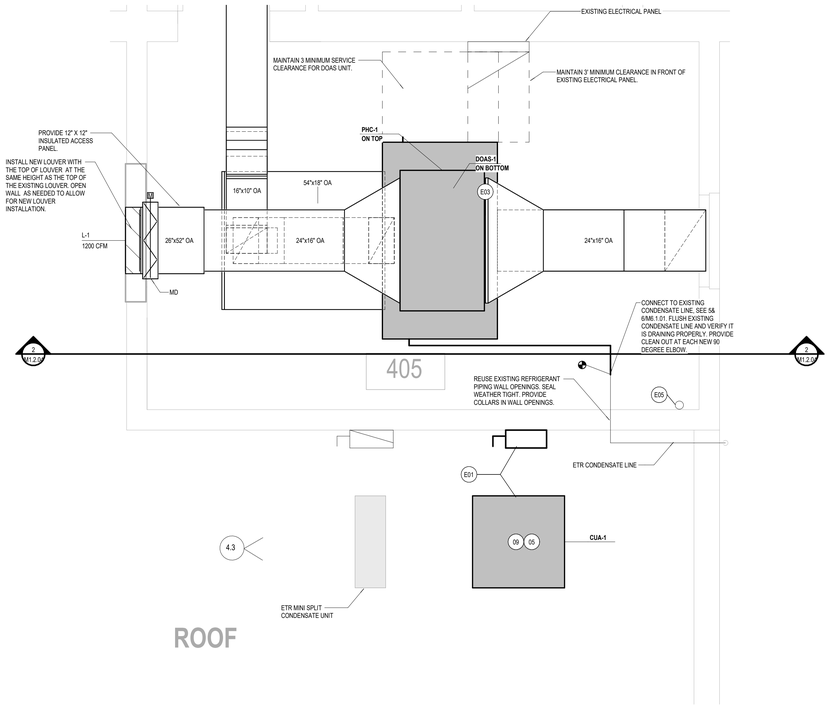
A. Corrosive Environments: Use products that are suitable for environment to which they will be subjected. Conduit, tubing, and enclosures to be minimum 316L stainless steel with an enclosure rating of NEMA 250, 4X.

3.3 DEMONSTRATION AND INSTRUCTIONS

A. ~~Demonstrate complete and operating system to Owner.~~Engage a factory-authorized service representative with complete knowledge of Project-specific system installed to train Owner's maintenance personnel to adjust, operate, and maintain DDC system.

B. Extent of Training:
   1. Base extent of training on scope and complexity of DDC system indicated and training requirements indicated. Provide extent of training required to satisfy requirements indicated even if more than minimum training requirements are indicated.

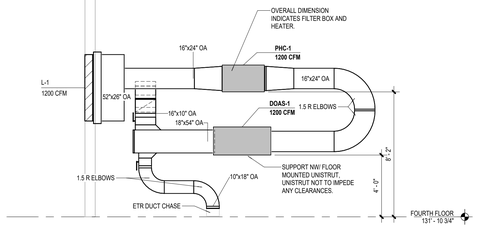
END OF SECTION



3 M1.2.04 ENLARGED MECHANICAL ROOM PLAN

1/2" = 1'-0"

NOTE: NOT ALL ARCHITECTURAL ITEMS ARE MODELED. EXACT DIMENSIONS TO BE FIELD VERIFIED.



2 M1.2.04 MECHANICAL ROOM SECTION

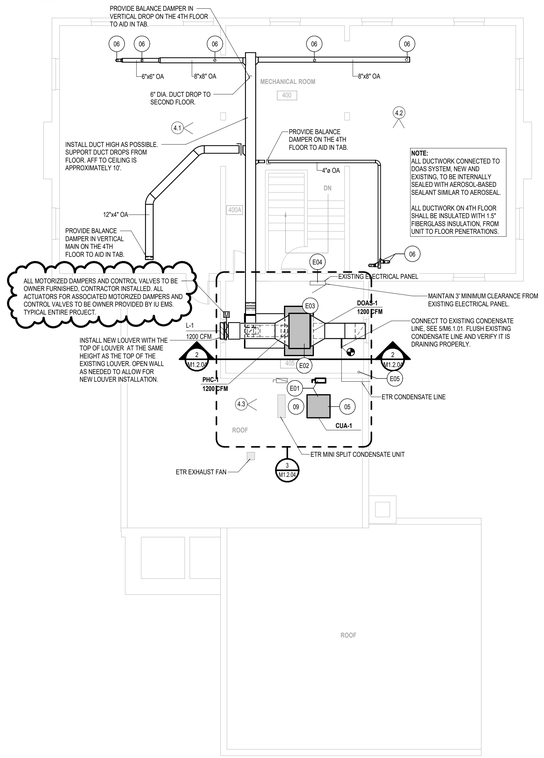
1/4" = 1'-0"

4.1 M1.2.04 MECHANICAL PHOTO 4.1

NOT TO SCALE

4.2 M1.2.04 MECHANICAL PHOTO 4.2

NOT TO SCALE



FOURTH FLOOR HVAC PLAN

1/8" = 1'-0"

INSTALL NEW UNIT ON EXISTING CURBS PER MFR INSTALLATION DETAILS. MODIFY CURB AS NEEDED TO ALLOW FOR INSTALL. SEE KEYNOTE 9.

4.3 M1.2.04 MECHANICAL PHOTO 4.3

NOT TO SCALE

	MECHANICAL KEYNOTE LEGEND
05	PROVIDE NEW CONDENSING UNIT INTERLOCKED WITH INDOOR UNIT. EXTEND/MODIFY CURB AS NEEDED WITHOUT VOIDING EXISTING ROOF WARRANTY, SEE M1.1.04.
06	4" DIA. DUCT DROPS TO FLOOR BELOW. TRANSITION TO DIFFUSER NECK SIZE AS NECESSARY. INSTALL BALANCE DAMPER BEFORE PENETRATION TO THE THIRD FLOOR. COORDINATE EXACT DROP LOCATION WITH LIGHTING, CONDUIT AND EXISTING CONDITIONS ON THE FLOOR BELOW.
09	COORDINATE ALL ROOF WORK WITH IU CONSTRUCTION MANAGER AND MIKE HUFF (HUFFMIKE@IU.EDU) TO ENSURE ROOF WARRANTY IS NOT AFFECTED.
10	PROVIDE NEW REFRIGERANT PIPING, SIZED PER MFR. RECOMMENDATIONS. SEAL ALL PENETRATIONS AIR TIGHT. REFRIGERANT SUCTION PIPING SHALL BE EXTERNALLY INSULATED PER SPECIFICATIONS AND HAVE ALUMINUM JACKETING APPLIED. REFRIGERATION HOT GAS PIPING SHALL BE PAINTED WITH CORROSION RESISTANT PAINT

	ELECTRICAL KEYNOTE LEGEND
E01	PROVIDE 3PH 208V 40A CIRCUIT BREAKER AT EXISTING ELECTRICAL PANEL. PROVIDE (3) #8 AWG + #10AWG G, 3/4" TO NEW OUTDOOR CONDENSING UNIT. PROVIDE NON FUSED DISCONNECT AT UNIT. RUN NEW CONDUIT UP TIGHT TO CEILING, ACROSS TO EXTERIOR WALL, DOWN TO JBOX, THEN THROUGH EXISTING WALL PENETRATION OPENING, AND INTO BACK OF DISCONNECT ON EXTERIOR WALL. SEAL WALL PENETRATION.
E02	PROVIDE 1PH 208V 60A CIRCUIT BREAKER AT EXISTING ELECTRICAL PANEL. PROVIDE (2) #6 AWG + #10AWG G, 1" CONDUIT TO NEW PHC-1.
E03	PROVIDE 1PH 208V 15A CIRCUIT BREAKER AT EXISTING ELECTRICAL PANEL. PROVIDE (2) #12 AWG + #12AWG G, 3/4" CONDUIT TO NEW DOAS-1.
E04	PROVIDE NEW TYPE WRITTEN PANEL SCHEDULE AT EXISTING ELECTRICAL PANEL.
E05	PROVIDE NEW CONDUIT AND (4) # 12 AWG FROM NEW JBOX TO EXISTING TO REMAIN CONDENSING UNIT DISCONNECT.

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INDIANA UNIVERSITY

BLOOMINGTON, INDIANA

ISSUANCES

01.05.2026	BIDS & CONSTRUCTION
04.20.2026	ADDENDUM 001

DRAWN LDE

REVIEWED OSO

PROJECT NO. 5-6633

FOURTH FLOOR PLANS

M1.2.04

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DEDICATED OUTDOOR AIR UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	OUTSIDE AIR					SUMMER CONDITIONS					WINTER CONDITIONS					ELECTRICAL					OPER. WEIGHT (LB)
			CFM	TSP (in-wg)	ESP (in-wg)	MOTOR RPM	MOTOR HP	OA - EAT (DB °F)	OA - EAT (WB °F)	OA - LAT (DB °F)	OA - LAT (WB °F)	CAPACITY (MBH)	OA - EAT (DB °F)	OA - EAT (WB °F)	OA - LAT (DB °F)	OA - LAT (WB °F)	CAPACITY (MBH)	VOLT	PH	MCA	MOP	
DOAS-1	LG	ARND153ICR4	1200	2.20	2.00	1563	1	95.0	78.0	54.7	52.8	85.6	-10.0	9.3	75.2	48.0	86.6	208	1	7.5	15.0	364

GENERAL REQUIREMENTS:

1. SUPPORT WITH SPRING TYPE VIBRATION ISOLATION HANGERS (ASHRAE TYPE 3).
2. CONNECT DUCTWORK WITH FLEXIBLE DUCT CONNECTORS TO INLET AND OUTLET OF UNIT.
3. COORDINATE ALL EQUIPMENT SERVICE CLEARANCES.
4. PROVIDE MFR CONTROLLER WITH BACNET CAPABLE INTEGRATION TO EXISTING BMS

CONDENSING UNIT (AIR-COOLED) SCHEDULE

MARK	UNIT SERVED	MANUFACTURER	MODEL	NOMINAL TONS	REFRIGERANT	EFFICIENCY	ELECTRICAL				OPER. WEIGHT (LB)
						EER	VOLT	PH	MCA	MOP	
CUA-1	DOAS-1	LG	ARUM121BTE5	10	R-410A	19.2	208	3	30.9	40	

GENERAL REQUIREMENTS:

1. PROVIDE FACTORY MOUNTED DISCONNECT SWITCH
2. PROVIDE FACTORY HAIL GUARD
3. PROVIDE HOT GAS BYPASS VALVE
4. COORDINATE ALL EQUIPMENT SERVICE CLEARANCES
5. SUPPORT TO EXISTING ROOF CURB WITH RESTRAINED SPRING ISOLATORS (ASHRAE TYPE 4).

ELECTRIC HEATING COIL SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	FILTER SIZE WxH (IN)	KW	MIN EAT (°F)	ELECTRICAL	
							VOLT	PH
PHC-1	LG	ZWPREHTR01	1200	20X25	10	-12	208	1

GENERAL REQUIREMENTS:

1. W/ SCR, 24V CONTROL.
2. WASHABLE MESH AND MERV 8 FILTERS.
3. PROVIDE MFR DISCONNECT OR STANDALONE NON-FUSED DISCONNECT AT UNIT.
4. INTERLOCK PREHEAT COIL WITH INDOOR UNIT OPERATION.
5. COORDINATE ALL EQUIPMENT SERVICE CLEARANCES

LOUVER SCHEDULE

MARK	MODEL	SIZE	TYPE	CFM	FREE AREA (SF)	FREE AREA VELOCITY (FPM)	MAX APD (in-wg)
L-1	GREENHECK ESD-435-30X52	26"x52"	4 in. DRAINABLE BLADE LOUVER	1200	5.0	240	0.01

DIFFUSER & GRILLE SCHEDULE

MARK	MANUFACTURER	MODEL	DESCRIPTION	BORDER TYPE	MATERIAL	FINISH	NOTES
S-1	TITUS	300RL	ADJUSTABLE SUPPLY GRILLE WITH DOUBLE DEFLECTION	SURFACE MOUNT	STEEL	WHITE	1
S-2	TITUS	300F	ADJUSTABLE ROUND SUPPLY GRILLE WITH DOUBLE DEFLECTION	SURFACE MOUNT	STEEL	WHITE	2
S-3	TITUS	TMRA	ADJUSTABLE ROUND CEILING DIFFUSER		STEEL	WHITE	2

GENERAL REQUIREMENTS:

1. ALL DIFFUSERS AND GRILLES SHALL BE PAINTED TO MATCH EXISTING ADJACENT SURFACES.
2. CONTRACTOR IS RESPONSIBLE FOR ALL ACCESSORIES REQUIRED FOR WALL OR DUCT MOUNTING.
3. PROVIDE WITH INTEGRAL BALANCE DAMPER WHERE DUCTWORK MOUNTED DAMPER IS NOT POSSIBLE.

NOTES:

1. 6"X4" NECK SIZE
2. 6" NECK SIZE

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INDIANA UNIVERSITY

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ISSUANCES

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MECHANICAL SCHEDULES

M5.1.01